

MECO

RSVP Review Status Sheet

Date: 12/29/04 12:00 AM

WBS No. 1.4.4

Title: MECO

Preparer/Manager: Dave Phillips

Current Cost Est.(FY05 \$M) \$11.5

Assigned Contingency % 15.9%

Cost Elements (FY05 \$M)

Matls	\$2.7
Effort	\$4.7
Ohd	\$2.4
Conting	\$1.7
Total	<u>\$11.5</u>

WBS Dictionary Definition: _____

Technical Level of Confidence: (choose one)

Prototype Demonstrated	_____	Elements Built & Tested	_____
Similar System Exists	_____	Similar Technology Works	_____
Novel System Concept	_____	No Candidate Concept Yet	_____
Other (Comment)	_____		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	<u>0%</u>	Engineered Design	<u>0%</u>
Engineered Conceptual	<u>0%</u>	Scientist Conceptual	<u>0%</u>
Guess	<u>0%</u>	Other (specify)	<u>0%</u>
		Total	<u>0%</u>

Status of Hardware/Software Development: _____

Issues (funding, collaborator shortage, engineering help, etc.): _____

MECO

1/6/05 11:00 AM

1.4.4.1

Project Support & Integrat

Dave Phillips

\$2.20

16.1%

Cost Elements (FY05 \$M)

\$0.00

\$1.36

\$0.63

\$0.22

\$2.20

WBS Dictionary Definition: Liaison Physicist and Engineer for the design, fabrication and installation of the MECO Proton Beamline and Experiment at CA.

Technical Level of Confidence: (choose one)

Prototype Demonstrated

Similar System Exists

Novel System Concept

Other (Comment)

Elements Built & Tested

Similar Technology Works

No Candidate Concept Yet

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product

Engineered Conceptual

Guess

Engineered Design

Scientist Conceptual

Other (specify)

Total

Status of Hardware/Software Development:

Issues (funding, collaborator shortage, engineering help, etc.):

Issues (funding, collaborator shortage, engineering help, etc.):

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RSVP Review Status Sheet

Date: 12/29/04 12:00 AM

WBS No. 1.4.4.2

Title: MECO Proton Beamline

Preparer/Manager: Dave Phillips

Current Cost Est.(FY05 \$M) \$5.32

Assigned Contingency % 23.7%

Cost Elements (FY05 \$M)

Matls	\$1.41
Effort	\$2.12
Ohd	\$0.96
Conting	\$0.84
Total	<u>\$5.32</u>

WBS Dictionary Definition:

Delivers the Proton Beam from the AGS Switchyard to the entrance to the Production Solenoid. Major elements include:

1.4.4.2.1	\$364k	Equipment Removal	Clearing the A-Line and part of D-Line area of existing equipment.
1.4.4.2.2	\$768k	Shielding Procurements	Purchases of new shielding for the MECO Solenoids to meet needs not filled by existing CA inventory.
1.4.4.2.3	\$498k	Power Supplies	Refurbishment of AC to DC power supplies for beamline magnets. Includes controls upgrade
1.4.4.2.4	\$458k	Magnets	Beamline magnets for focusing, bending & pitching the beam. Refurbishment of 16 existing magnets and fabrication of 2 new magnets and 2 new pole tip vacuum boxes.
1.4.4.2.5	\$476k	Vacuum	Encloses primary proton beam from the Switchyard to the PS with a high vacuum region for the RFMM. Also includes PS downstream vacuum closure and Helium Box to beam dump.
1.4.4.2.6	\$ 16k	Cooling Water	Beamline magnet cooling water.
1.4.4.2.7	\$1001k	Beamline Installation	Installing shielding, power supplies, magnets, vacuum and facilities on experimental floor.
1.4.4.2.8	\$143k	Safety & Facilities	Purchase/installation of ODH, fire detection, Bldg 912 roof repairs, Controls Enclosure and a RFMM enclosure.

Technical Level of Confidence: (choose one)

Prototype Demonstrated	<u> </u>	Elements Built & Tested	<u> </u>
Similar System Exists	<u>X</u>	Similar Technology Works	<u> </u>
Novel System Concept	<u> </u>	No Candidate Concept Yet	<u> </u>
Other (Comment)	<u> </u>		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	<u>0%</u>	Engineered Design	<u>20%</u>
Engineered Conceptual	<u>70%</u>	Scientist Conceptual	<u>0%</u>
Guess	<u>10%</u>	Other (specify)	<u>0%</u>
		Total	<u>100%</u>

Status of Hardware/Software Development:

Most equipment for MECO Proton Beamline either exists or is similar to an existing design. Relatively minor exceptions are the Production Solenoid vacuum end cap and the use of bulk zinc shielding as a cost effective non-magnetic radiation shielding for the Transport Solenoid and the Cosmic Ray Shield.

Issues (funding, collaborator shortage, engineering help, etc.): Funding, just need to start the job.

MECO RSVP Review Status Sheet

Date: 12/29/04 12:00 AM

WBS No. 1.4.4.3

Title: MECO Instrumentation

Preparer/Manager: Dave Phillips

Current Cost Est.(FY05 \$M) \$1.22

Assigned Contingency % 20.0%

Cost Elements (FY05 \$M)

Matls	\$0.47
Effort	\$0.34
Ohd	\$0.26
Conting	\$0.16
Total	<u>\$1.22</u>

WBS Dictionary Definition: _____

Technical Level of Confidence: (choose one)

Prototype Demonstrated	_____	Elements Built & Tested	_____
Similar System Exists	_____	Similar Technology Works	_____
Novel System Concept	_____	No Candidate Concept Yet	_____
Other (Comment)	_____		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	<u>0%</u>	Engineered Design	<u>0%</u>
Engineered Conceptual	<u>0%</u>	Scientist Conceptual	<u>0%</u>
Guess	<u>0%</u>	Other (specify)	<u>0%</u>
		Total	<u>0%</u>

Status of Hardware/Software Development: _____

Issues (funding, collaborator shortage, engineering help, etc.): _____

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1.4.4.4

MECO Security

Dave Phillips

\$0.46

20.1%

Cost Elements (FY05 \$M)

Matls	\$0.07
Effort	\$0.22
Ohd	\$0.11
Conting	\$0.06
Total	<u>\$0.46</u>

WBS Dictionary Definition: Personnel Access System to beam caves.

Technical Level of Confidence: (choose one)

Prototype Demonstrated	_____	Elements Built & Tested	_____
Similar System Exists	_____	Similar Technology Works	_____
Novel System Concept	_____	No Candidate Concept Yet	_____
Other (Comment)	_____		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	0%	Engineered Design	0%
Engineered Conceptual	0%	Scientist Conceptual	0%
Guess	0%	Other (specify)	0%
		Total	0%

Status of Hardware/Software Development: _____

Issues (funding, collaborator shortage, engineering help, etc.): _____

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RSVP Review Status Sheet

Date: 12/29/04 12:00 AM

WBS No. 1.4.4.5

Title: MECO Controls

Preparer/Manager: Dave Phillips

Current Cost Est.(FY05 \$M) \$0.23

Assigned Contingency % 22.4%

Cost Elements (FY05 \$M)

Matls	\$0.09
Effort	\$0.06
Ohd	\$0.05
Conting	\$0.03
Total	<u>\$0.23</u>

WBS Dictionary Definition: _____

Technical Level of Confidence: (choose one)

Prototype Demonstrated	_____	Elements Built & Tested	_____
Similar System Exists	_____	Similar Technology Works	_____
Novel System Concept	_____	No Candidate Concept Yet	_____
Other (Comment)	_____		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	<u>0%</u>	Engineered Design	<u>0%</u>
Engineered Conceptual	<u>0%</u>	Scientist Conceptual	<u>0%</u>
Guess	<u>0%</u>	Other (specify)	<u>0%</u>
		Total	<u>0%</u>

Status of Hardware/Software Development: _____

Issues (funding, collaborator shortage, engineering help, etc.): _____

MECO
RSVP Review Status Sheet

Date: 12/29/04 12:00 AM

WBS No. 1.4.4.6

Title: MECO Experiment

Preparer/Manager: Dave Phillips

Current Cost Est.(FY05 \$M) \$2.08

Assigned Contingency % 30.2%

Cost Elements (FY05 \$M)

Matls	\$0.70
Effort	\$0.58
Ohd	\$0.41
Conting	\$0.39
Total	<u>\$2.08</u>

WBS Dictionary Definition: Items of CA Responsibility for MECO Experiment.

Technical Level of Confidence: (choose one)

Prototype Demonstrated	_____	Elements Built & Tested	_____
Similar System Exists	_____	Similar Technology Works	_____
Novel System Concept	_____	No Candidate Concept Yet	_____
Other (Comment)	_____		

Basis of the Cost Estimate: (by percentage of total cost: sum of fractions = 100%)

Commercial Product	<u>0%</u>	Engineered Design	<u>0%</u>
Engineered Conceptual	<u>0%</u>	Scientist Conceptual	<u>0%</u>
Guess	<u>0%</u>	Other (specify)	<u>0%</u>
		Total	<u>0%</u>

Status of Hardware/Software Development: _____

Issues (funding, collaborator shortage, engineering help, etc.): _____
